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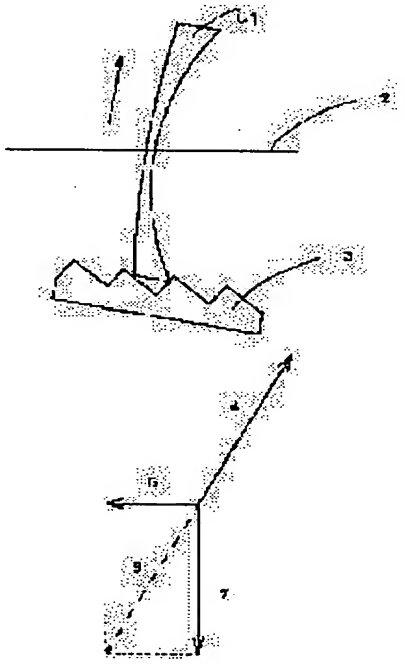
(54) DEWATERING AND DRYING METHOD AFTER CLEANING HIGH POLYMER BODY

(57)Abstract:
PURPOSE: To obtain a highly dewatering state by pulling up a high polymer body and a jig, holding it with an inclination of ≤30° and ≥0.5° against the vertical direction when the high polymer body is pulled up from a water tank after cleaning the polymer body.
CONSTITUTION: The high polymer body 1 and the jig 3 holding it are pulled up in the state inclined to ≥0.5° and ≤30° against the vertical direction, namely to the direction 4 in the figure. Then, forces to pull the stuck water not only in the vertical direction 7 but also in the horizontal direction 5 are applied due to a surface tension of water, thereby the dewatering is surely performed. When the inclination angle is less than 0.5° , the applying force in the horizontal direction 5 of the surface tension of water is weakened, and on the other hand, when it is over 30° , the dewatering effect is equal but it is not preferred because the opening area of the cleaning tank is necessitated to make it large and the degradation of the water quality is caused.



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CLAIMS

[Claim(s)]
[Claim 1] this macromolecule object out of [after washing a macromolecule object] a tank -- pulling up -- a ridge -- carrying out -- further -- the remaining heat of this macromolecule object, or hot blast -- the ridge dryness method after washing of the macromolecule object characterized by to pull up the fixture holding this macromolecule object and this macromolecule object in the method of drying by warming where the inclination of 0.5 degrees or more and 30 degrees or less is given to a perpendicular direction
[Claim 2] The ridge dryness method after washing of the macromolecule object according to claim 1 characterized by pulling up in the direction in which the angle of 0.5 degrees or more and 30 degrees or less attached the fixture holding a macromolecule object and this macromolecule object to the perpendicular direction.
[Claim 3] The ridge dryness method after washing of the macromolecule object according to claim 1 or 2 characterized by relative humidity warming by 50% or less of hot blast.
[Claim 4] The ridge dryness method after washing of the macromolecule object according to claim 1, 2, or 3 characterized by being the hot blast heated by infrared radiation.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Industrial Application] this invention relates to the ridge dryness method of a macromolecule object.
[0002]
[Description of the Prior Art] Although JP,62-53233,B is in the method of draining off water by pulling up a macromolecule object from a tank conventionally As shown in drawing 2 , in order to pull up a macromolecule object from the inside of a tank perpendicularly with a perpendicular posture, Waterdrop remained also in a part for a contact surface and the fixture itself with the fixture which waterdrop tends to remain in an up lateral portion, and holds a macromolecule object and this macromolecule object, and the macromolecule object with thick thickness had the fault that a perfect dryness front face was not obtained.
[0003] In addition, although aimed at dry matters-ed other than a macromolecule object, the method of draining off water by pulling up from a tank is proposed.
[0004] The taper of a couple with which JP,63-67735,A inclined toward the center-section side mutually from the both-sides edge in the supporter of a base (for example, semiconductor wafer) at the reverse draft is formed. On these tapers Or although the method of pulling up and drying at slow speed from ******** using the base hold equipment constituted so that the aforementioned base might be supported at right angles to the center position of a slot, where the lower part of the aforementioned base is contacted on the bottom is proposed It had the fault that specific base hold equipment is required and the base hold equipment which was being used conventionally cannot use it at all, and the fault that moisture will remain slightly even if it uses specific base hold equipment.
[0005] Moreover, in order to pull up JP,60-223130,A, making a dry matter-ed rock, the raising dust by friction with a dry matter-ed and a rocking rod became a cause, and it had the fault that high dryness quality was not obtained.
[0006] Moreover, although JP,61-270399,A limited the practical use range of raising speed as it is 2 mm/sec - 20 mm/sec, in order to pull up a work from the inside of a tank perpendicularly with a perpendicular posture, it had the fault that high dryness quality was not obtained.
[0007]
[Problem(s) to be Solved by the Invention] With the conventional technology, like the above-mentioned, although it does not become a stain or a stain remains, in order that specific base hold equipment may be newly needed or waterdrop may remain on a base front face, it has troubles, like a foreign matter remains.
[0008] Then. this invention solves such a trouble, and the place made into the purpose has specific newly unnecessary base hold equipment. and it is in the place which offers the ridge dryness method after washing which gives high dryness quality.
[0009]
[Means for Solving the Problem] The ridge dryness method after washing of the macromolecule object of this invention is characterized by pulling up the fixture holding a macromolecule object and this macromolecule object, where the inclination of 0.5 degrees or more and 30 degrees or less is given to a perpendicular direction.
[0010] Moreover, it is characterized by pulling up in the direction in which the angle of 0.5 degrees or more and 30 degrees or less attached the fixture holding a macromolecule object and this macromolecule object to the perpendicular direction. Moreover, after a ridge, when carrying out hot blast warming, it is characterized by the relative humidity of the hot blast being 50% or less. Moreover. it is characterized by heating this hot blast by infrared radiation.
[0011]
[Function] According to this invention, although the inclination of the fixture holding a macromolecule object and this macromolecule object is determined by the size of a macromolecule object and the aforementioned fixture, a configuration, the quality of the material, etc., its 0.5-degree or more inclination

of 30 degrees or less is de[redacted]le to a perpendicular direction. If it pulls [redacted]t the time of raising where the above inclinations are given, also in the macromolecule object and the aforementioned fixture which usually had a horizontal flat surface as shown in drawing 1 , a being easy ridge will be attained with the surface tension of water. The ridge of the flat-surface section of a macromolecule and the aforementioned fixture becomes it bad that this inclination is less than 0.5 degrees. Since a macromolecule object will become easy to fall from the aforementioned fixture on the other hand if the inclination exceeding 30 degrees is given, the inclination of 30 degrees or less is usually desirable.

[0012] The raising direction has 0.5 degrees or more and desirable 30 degrees or less to a perpendicular direction, although the raising direction is determined by the size of the fixture which holds a macromolecule object and this macromolecule object like future, a configuration, the quality of the material, etc. Since the water which has adhered to the macromolecule object and the aforementioned fixture not only to a perpendicular direction but to the horizontal direction will be brought in with the surface tension which water has as shown in drawing 3 if it pulls up in the direction which gave the above angles at the time of raising, it comes to be able to perform certainly a ridge of a part for a contact surface and the aforementioned fixture itself of a macromolecule object with thick thickness and this macromolecule object, and the aforementioned fixture. If the raising direction becomes less than 0.5 degrees to a perpendicular direction, since the operation to the horizontal direction of the surface tension of water will become weaker, waterdrop becomes easy to remain. Although ridge nature is equivalent on the other hand if it pulls up in the direction exceeding 30 degrees, when the latus washing tub of an effective-area product is needed, since deterioration of water quality is caused, it is desirable that it is 30 degrees or less of practical use.

[0013] On the other hand, Mukai, two directions of two dimension, i.e., the direction, or the direction of three dimensions is sufficient as the inclination at the time of raising of a fixture holding a macromolecule object and this macromolecule object, and the angle of the raising direction to a perpendicular direction. It is determined by the size of a macromolecule object and the aforementioned fixture, a configuration, the quality of the material, etc.

[0014] Since a dimensional change arises, or a crack tends to enter, and the macromolecule object inferior to thermal resistance will promote foreign matter mixing from wetted parts, such as a tub and piping, by elevation of solution temperature, and will cause deterioration of water quality and it will adhere to the front face of a macromolecule object through the steam on the water surface through water if the temperature of the immersing water of a raising tub is too high, dryness quality is reduced. On the other hand, since it is in the extension-ized inclination of the drying time in a low-temperature example, below 80 degreeC is good more than 5 degreeC practically.

[0015] Moreover, if the raising speed from water is pulled up not much quickly, waterdrop will become easy to remain on a macromolecule object, and it will be connected with generating of silverfish. On the other hand, since it is in the extension-ized inclination of raising time, a second is good in a low-speed side, as a matter of fact in 0.2mm/second or more 25mm /or less. Moreover, although it is effective to ** hot blast further with the method of using the remaining heat of this macromolecule object as for the dryness after the above-mentioned ridge, evaporation of water has effective fall and infrared heating of relative humidity.

[0016]

[Example]

(Example 1) The diameter of 75mm made from CR-39 (diethylene-glycol bisallyl carbonate), the thickness of 11.4mm, and the front curve set 30 6Dptr concave lenses to the fixture in 1.75 curves, it put into the water (the first tub) into which the surfactant of 50 degreeC went after the lens had gone into the fixture, and ultrasonic cleaning of 28kHz600w was performed for 3 minutes. Next, pure water washed for 3 minutes in the tank (the second tub) currently overflowed. Next, where this lens and 10 degrees of these fixtures are leaned in the direction of a lens concave surface to a perpendicular direction after being immersed at the tank (the 3rd tub) which pure water (5 M omega or more of specific resistance, the number of the particle in liquid one or less particle/ml 0.2 micrometers or more) with a water temperature [C] of 50 degrees overflows by 2mm/second in raising speed for 1 minute, it pulled up perpendicularly. Waterdrop had not adhered to a part for the contact surface of a lens front face, a lens up lateral portion and a lens, and a fixture. Although some waterdrop remained only in the lower part of a fixture, the obtained lens was a beautiful lens without dripping, a spot, etc.

[0017] (Example 2) In the example 1, instead of the concave lens, the diameter of 65mm, the thickness of 1.1mm, and the front curve used the 6Dptr convex lens in seven curves, and it carried out on the same conditions as an example 1 except [all] having raised in the direction which similarly gave 10-degree angle in the direction of a lens concave surface to the perpendicular direction where this lens and 10 degrees of these fixtures are leaned in the direction of a concave surface to a perpendicular direction. The

obtained lens does not h[redacted]ripping, a spot, etc. and waterdrop had n[redacted]hered to a part for the contact surface of a lens up late[redacted] portion and a lens, and a fixture. Some waterdrop had only adhered to the lower part of a fixture.

[0018] (Example 3) In the example 1, it carried out on the same conditions as an example 1 except [all] having raised in the direction which similarly gave 5-degree angle in the direction of a lens concave surface to the perpendicular direction to the longitudinal direction of 5 degrees, a lens, and a fixture where 5-degree inclination is given to the longitudinal direction of 5 degrees, a lens, and a fixture in the direction of a concave surface to a perpendicular direction for this lens and this fixture. Waterdrop had not adhered to a part for the contact surface of a lens front face, a lens up lateral portion and a lens, and a fixture at all. Moreover, it was the beautiful lens in which the lens obtained by waterdrop not ******(ing) at all at the lower part of a fixture does not have dripping, a spot, etc., either.

[0019] (Example 1 of comparison) In the example 1, it carried out on the same conditions as an example 1 except [all] having pulled up perpendicularly with the perpendicular posture. Although there was no adhesion of waterdrop in a lens front face, about 5mm waterdrop had adhered to three contact portions of one waterdrop with a diameter of 2mm, a lens, and a fixture from the diameter of 3mm at the lens up lateral portion, respectively. Moreover, some waterdrop had adhered also to the lower part of a fixture. the obtained lens -- the contact surface of a lens and a fixture -- three places per part -- respectively -- 3 to about 5mm silverfish -- the pattern was in sight

[0020] (Example 4) It carried out on the same conditions as an example 1 except [all] having performed the water temperature of the 3rd tub on conditions with a 30degreeC and a raising speed of 0.8mm [/second] in the example 1. The obtained lens does not have dripping, a spot, etc. and waterdrop had not adhered to a part for a fixture contact surface with a lens up lateral portion and a lens. The waterdrop of a piece had only adhered to the lower part of a fixture.

[0021] (Example 5) In the example 2, the water temperature of the 3rd tub was performed by 30degreeC, and raising speed was performed on 0.8mm [/second] conditions. The obtained lens does not have dripping, a spot, etc. and waterdrop had not adhered to a part for the contact surface of a lens up lateral portion and a lens, and a fixture. Moreover, waterdrop had not adhered to the lower part of a fixture, either.

[0022] (Example 6) In the example 3, it carried out on the same conditions as an example 3 except [all] having performed the water temperature of the 3rd tub by 30degreeC, and having performed raising speed on 0.8mm [/second] conditions. The obtained lens does not have dripping, a spot, etc. and waterdrop had not adhered to the lower part of the part for a contact surface and the fixture of a lens up lateral portion and a lens, and a fixture, either.

[0023] (Example 2 of comparison) In the example 1, it carried out on the same conditions as an example 1 except [all] having pulled up the tank of the 3rd tub to 30degreeC, and having pulled up raising speed perpendicularly in a second in 0.8mm /with the perpendicular posture. Although there was no adhesion of waterdrop in a lens front face, about 3mm waterdrop had adhered to three contact portions of a lens and a fixture from the diameter of 1mm, respectively. Moreover, some waterdrop had adhered also to the lower part of a fixture. the obtained lens -- the contact surface of a lens and a fixture -- three places per part -- respectively -- 1 to about 3mm silverfish -- the pattern was in sight

[0024]

[Effect of the Invention] In the ridge dryness after washing of a macromolecule object, specific base hold equipment was not needed like **** by this invention, but it became possible to obtain very high ridge dryness, with the fixture holding this conventional macromolecule object used.

[Translation done.]

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is a state diagram at the time of raising of this invention.
[Drawing 2] It is a state diagram at the time of the conventional raising.
[Drawing 3] It is drawing having shown how which the surface tension at the time of raising of this invention requires.
[Description of Notations]
1 Macromolecule Object
2 Oil Level
3 Fixture
4 The Raising Direction
5 Horizontal
6 Perpendicular Direction
7 Surface Tension of Oil Level

[Translation done.]

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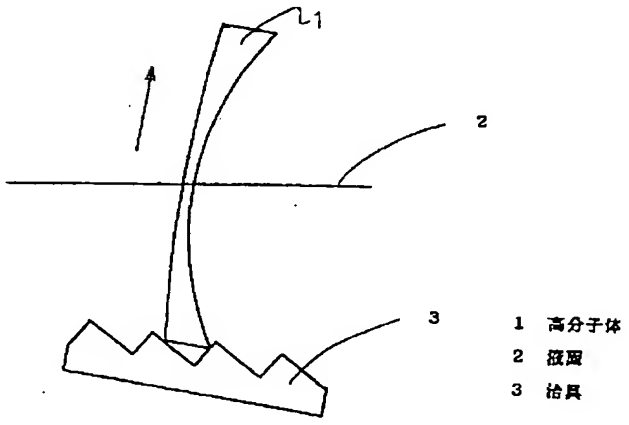
(54)【発明の名称】　高分子体の洗浄後の水切り乾燥方法

(57)【要約】
本発明は、高分子体を洗浄後、水槽から該高分子体を引き上げて水切りを行い、更に該高分子体の余熱或いは、熱風加温により乾燥を行う方法に於いて、垂直方向に対して０．５°以上、３０°以下の角度のついた方向に引き上げることを特徴とする高分子体の洗浄後の水切り乾燥方法。



【特許請求の範囲】

【請求項１】　高分子体を洗浄後、水槽内から該高分子体を引き上げて水切りを行い、更に該高分子体の余熱或いは熱風加温により乾燥を行う方法に於いて、該高分子体と該高分子体を保持する治具を垂直方向に対して０．５°以上、３０°以下の傾きをもたせた状態で引き上げることを特徴とする高分子体の洗浄後の水切り乾燥方法。

【請求項２】高分子体と該高分子体を保持する治具を垂直方向に対して０．５°以上、３０°以下の角度のついた方向に引き上げることを特徴とする請求項１記載の高分子体の洗浄後の水切り乾燥方法。

【請求項３】　相対湿度が５０%以下の熱風で加温することを特徴とする請求項１または請求項２記載の高分子体の洗浄後の水切り乾燥方法。

【請求項４】赤外線により加熱された熱風であることを特徴とする請求項１または請求項２または請求項３記載の高分子体の洗浄後の水切り乾燥方法。

【発明の詳細な説明】

【０００１】

【産業上の利用分野】本発明は高分子体の水切り乾燥方法に関するものである。

【０００２】

【従来の技術】従来、高分子体を水槽から引き上げて水切りを行う方法に特公昭６２－５３２３３があるが、図２に示したように高分子体を水槽内から垂直の姿勢で垂直方向に引き上げるため、厚みの厚い高分子体は上部側面部に水滴が残りやすく、また、高分子体と該高分子体を保持する治具との接点部分および治具自体にも水滴が残り、完全なる乾燥表面が得られないという欠点を有していた。

【０００３】このほかにも高分子体以外の被乾燥物を対象とするが、水槽から引き上げて水切りを行う方法が提案されている。

【０００４】特開昭６３－６７７３５は基体（例えば半導体ウエハ）の支持部にその両側端から中央部側へ互いに逆勾配に傾斜した一対のテーパーが形成され、これらのテーパー上または、その最低部上に前記基体の下部が当接された状態で前記基体が溝の中心位置に鉛直に支持されるように構成された基体収容装置を用いて温処理液から微速度で引き上げて乾燥する方法が提案されているが、特定の基体収容装置が必要であり、従来使用していた基体収容装置が全く使用できないという欠点と、たとえ特定の基体収容装置を使用しても僅かに水分が残ってしまうという欠点を有していた。

【０００５】また、特開昭６０－２２３１３０は、被乾燥物を揺動させながら引き上げるため、被乾燥物と揺動棒との摩擦による発塵が原因となり高い乾燥品質が得られないという欠点を有していた。

【０００６】また、特開昭６１－２７０３９９は引き上げ速度の実用範囲を２ｍｍ／ｓｅｃ～２０ｍｍ／ｓｅｃであると限定しているが、ワークを水槽内から垂直の姿勢で垂直方向へ引き上げるため、高い乾燥品質が得られないという欠点を有していた。

【０００７】

【発明が解決しようとする課題】従来技術では前述の如く、特定の基体収容装置が新規に必要になるとか、基体表面上に水滴が残るためしみが残る或いはしみにならないまでも異物が残る等の問題点を有する。

【０００８】そこで、本発明はこのような問題点を解決するもので、その目的とするところは、特定の基体収容装置が新規に必要なく、高い乾燥品質を付与する洗浄後の水切り乾燥方法を提供するところにある。

【０００９】

【課題を解決するための手段】本発明の高分子体の洗浄後の水切り乾燥方法は、高分子体と該高分子体を保持する治具を垂直方向に対して０．５°以上、３０°以下の傾きを持たせた状態で引き上げることを特徴とする。

【００１０】また、高分子体と該高分子体を保持する治具を垂直方向に対して０．５°以上、３０°以下の角度のついた方向に引き上げることを特徴をする。また、水切り後、熱風加温する場合、その熱風の相対湿度が５０%以下であることを特徴とする。また、該熱風が赤外線により加熱されていることを特徴とする。

【００１１】

【作用】本発明によれば、高分子体および該高分子体を保持する治具の傾きは、高分子体および前記治具の大きさ、形状、材質等により決定されるが、垂直方向に対して０．５°以上３０°以下の傾きが好ましい。引き上げ時、前記のような傾きを持たせた状態で引き上げると、図１に示したように通常水平方向の平面を持った高分子体および前記治具においても水の表面張力により容易に水切りが可能となる。この傾きが０．５°未満であると高分子および前記治具の平面部の水切りが悪くなる。一方、３０°を超える傾きを持たせると前記治具から高分子体が落下しやすくなるため、通常は、３０°以下の傾きが好ましい。

【００１２】引き上げ方向は前途と同様に高分子体および該高分子体を保持する治具の大きさ、形状、材質等により引き上げ方向が決定されるが、垂直方向に対して０．５°以上、３０°以下が好ましい。引き上げ時前記のような角度をつけた方向に引き上げると、図３に示したように水の持つ表面張力により、垂直方向だけでなく水平方向へも高分子体および前記治具に付着している水を引っ張り込むため、厚みの厚い高分子体および該高分子体と前記治具の接点部分および前記治具自体の水切りが確実にできるようになる。引き上げ方向が垂直方向に対して０．５°未満になると、水の表面張力の水平方向への作用が弱まるため、水滴が残りやすくなる。一方、３０°を越える方向へ引き上げると水切り性は同等であ

るが、開口面積の広い洗浄槽が必要となる上、水質の低下を招くことから、実用３０°以下であることが好ましい。

【００１３】高分子体及び該高分子体を保持する治具の引き上げ時の傾きおよび引き上げ方向の角度は垂直方向に対して一方向でも二方向すなわち二次元方向でも三次元方向でもかまわない。高分子体および前記治具の大きさ、形状、材質等により決定される。

【００１４】引き上げ槽の浸漬水の温度は高すぎると耐熱性に劣る高分子体は寸法変化が生じたり、クラックが入りやすく、また液温の上昇により槽及び配管等の接液部からの異物混入を促進し水質の低下を招き、水を通して或いは水面上の蒸気を通して高分子体の表面に付着するため、乾燥品質を低下させる。一方、低温例では乾燥時間の延長化傾向にあるため、実用上は５°Ｃ以上８０°Ｃ以下が良い。

【００１５】また、水からの引き上げ速度はあまり速く引き上げると高分子体上に水滴が残り易くなり、それがシミの発生に結びつく。一方、低速側では、引き上げ時間の延長化傾向にあるため、事実上は、０．２mm／秒以上２５mm／秒以下が良い。　また、上記水切り後の乾燥は、該高分子体の余熱を利用する方法と更に熱風を併する事が有効であるが、水の気化は相対湿度の低下と赤外線加熱が有効である。

【００１６】

【実施例】

（実施例１）ＣＲ－３９（ジエチレングリコールビスアリルカーボネート）製の直径７５mm、厚み１１．４mm、表カーブが１．７５カーブで６ディオプトリーの凹レンズ３０枚を治具にセットし、治具にレンズが入った状態で５０°Ｃの界面活性剤の入った水（第一槽）に入れ２８ＫＨｚ６００ｗの超音波洗浄を３分間行った。次に純水が、オーバーフローしている水槽（第二槽）で３分間洗浄した。次に水温５０°Ｃの純水（比抵抗５ＭΩ以上、液中パーティクル数０．２μm以上の粒子１個／ｍｌ以下）がオーバーフローする水槽（第３槽）に１分間浸漬後、引き上げ速度２mm／秒で該レンズと該治具を垂直方向に対してレンズ凹面方向に１０°傾けた状態で垂直方向に引き上げた。レンズ表面及びレンズ上部側面部及びレンズと治具の接点部分には、水滴は付着していなかった。治具の下部にのみ数個の水滴が残ったが、得られたレンズはタレ、斑点等のないきれいなレンズであった。

【００１７】（実施例２）実施例１において、凹レンズの代わりに直径６５mm、厚み１．１mm、表カーブが７カーブで６ディオプトリーの凸レンズを用い、該レンズと該治具を垂直方向に対して凹面方向へ１０°傾けた状態で、同じく垂直方向に対してレンズ凹面方向に１０°角度をつけた方向に引き上げを行った以外は、全て実施例１と同じ条件で行った。得られたレンズはタレ、斑

点等なく、レンズ上部側面部及びレンズと治具の接点部分には、水滴は、付着していなかった。治具の下部には数個の水滴が付着しているだけだった。

【００１８】（実施例３）実施例１において、該レンズと該治具を垂直方向に対して凹面方向に５°、レンズ及び治具の横方向へ５°傾きを持たせた状態で、同じく垂直方向に対してレンズ凹面方向へ５°、レンズ及び治具の横方向へ５°角度をつけた方向に引き上げを行った以外は、全て実施例１と同じ条件で行った。レンズ表面及びレンズ上部側面部及びレンズと治具の接点部分には、全く水滴は付着していなかった。また、治具の下部にも全く水滴は残付着せず、得られたレンズもタレ、斑点等のないきれいなレンズであった。

【００１９】（比較例１）実施例１において、垂直姿勢のまま垂直方向に引き上げた以外は全て実施例１と同じ条件で行った。レンズ表面には、水滴の付着はなかったが、レンズ上部側面部に直径２mmの水滴１点とレンズと治具の接点部分３箇所にそれぞれ直径３mmから５mm程度の水滴が付着していた。また、治具の下部にも数個の水滴が付着していた。得られたレンズはレンズと治具の接点部分３箇所にそれぞれ３mmから５mm程度のシミ模様が見えた。

【００２０】（実施例４）実施例１において第３槽の水温を３０°Ｃ、引き上げ速度０．８mm／秒の条件で行った以外は全て実施例１と同じ条件で行った。得られたレンズはタレ、斑点等もなく、レンズ上部側面部及びレンズと治具接点部分には、水滴は付着していなかった。治具の下部には、一個の水滴が付着しているだけだった。

【００２１】（実施例５）実施例２において、第３槽の水温を３０°Ｃ、引き上げ速度を０．８mm／秒の条件で行った。得られたレンズはタレ、斑点等もなく、レンズ上部側面部及びレンズと治具の接点部分には、水滴は付着していなかった。また、治具の下部にも水滴は付着していなかった。

【００２２】（実施例６）実施例３において、第３槽の水温を３０°Ｃ、引き上げ速度を０．８mm／秒の条件で行った以外は全て実施例３と同じ条件で行った。得られたレンズはタレ、斑点等もなく、レンズ上部側面部及びレンズと治具の接点部分及び治具の下部にも水滴は付着していなかった。

【００２３】（比較例２）実施例１において、第３槽の水槽を３０°Ｃ、引き上げ速度を０．８mm／秒で、垂直姿勢のまま垂直方向に引き上げた以外は全て実施例１と同じ条件で行った。レンズ表面には、水滴の付着がなかったが、レンズと治具の接点部分３箇所にそれぞれ直径１mmから３mm程度の水滴が付着していた。また、治具の下部にも数個の水滴が付着していた。得られたレンズは、レンズと治具の接点部分３箇所にそれぞれ１mmから３mm程度のシミ模様が見えた。

【００２４】

【発明の効果】本発明により上述の如く、高分子体の洗浄後の水切り乾燥において、特定の基体収容装置を必要とせず、従来の該高分子体を保持する治具を使用したまま、極めて高い水切り乾燥状態が得られることが可能になった。

【図面の簡単な説明】

【図１】本発明の引き上げ時の状態図である。

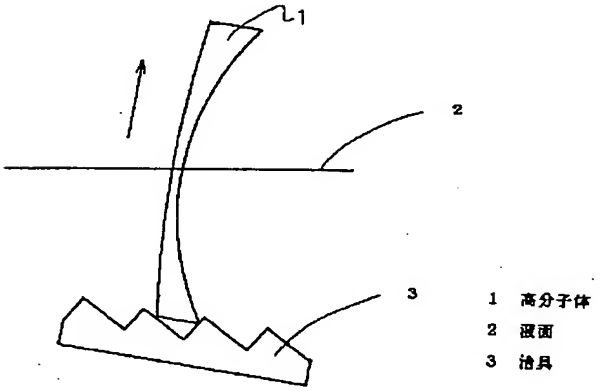
【図２】従来の引き上げ時の状態図である。

【図３】本発明の引き上げ時の表面張力のかかり方を示した図である。

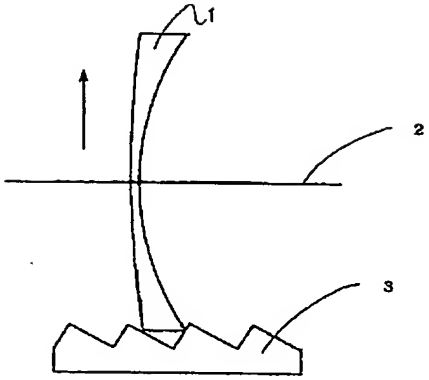
【符号の説明】

1　高分子体
2　液面
3　治具
4　引き上げ方向
5　水平方向
6　垂直方向
7　液面の表面張力

【図１】



【図２】



【図３】